

P a t e n t   C l a i m s

1. Motor vehicle having at least one displaceable roof section (7, 7') which when closed abuts a windshield frame (3) at the front of the vehicle and lateral outer areas that respectively abut a support (8), with at least part of the supports (8) being displaceable in lateral columns (5) of the windshield frame (3) to form an open roof section (2A),  
c h a r a c t e r i z e d   i n   t h a t  
the supports (8) are guided in a receiving channel (12) formed by the assigned lateral column (5) of the windshield frame (3) in the area of the end of said supports at the front of the vehicle and in the area of said supports lying in the exit region from the upper end of the lateral column (5), respectively by means of a roller bearing (13, 14) without play and at a defined distance from the wall of the receiving channel (12).
2. Motor vehicle in accordance with claim 1,  
c h a r a c t e r i z e d   i n   t h a t  
the end of the support (8) at the front of the vehicle has at least one approximately radial holding means (15) to form the roller bearing (13) at the front of the vehicle, which supports preferably three coplanar rolls (16).
3. Motor vehicle in accordance with claim 1 or 2,  
c h a r a c t e r i z e d   i n   t h a t

the roller bearing (14) assigned to the area where the support exits the lateral column is arranged in the area of a drive means (17) for the support (8).

4. Motor vehicle in accordance with claim 3,  
c h a r a c t e r i z e d i n t h a t  
that the drive means (17) comprises a tooth batten (18) arranged on the support (8) in longitudinal direction of said support and a pinion (20) that cooperates therewith and can be driven by a drive motor (19).
5. Motor vehicle in accordance with claim 4,  
c h a r a c t e r i z e d i n t h a t  
the support (8) in the area where it exits the lateral column (5) is guided by at least two rollers (21) of the roller bearing (14) assigned to the exit area and the pinion (20) of the drive means (17).
6. Motor vehicle in accordance with claim 4 or 5,  
c h a r a c t e r i z e d i n t h a t  
the roller bearing (14) assigned to the exit area and the pinion (20) of the drive means (17) are arranged in a sleeve-like housing part (23) that forms a stop (22) for the support (8).
7. Motor vehicle in accordance with claim 6,  
c h a r a c t e r i z e d i n t h a t  
the sleeve-like housing part (23) represents a separate component which can be mounted at the

respective lateral column (5) of the windshield frame (3).

8. Motor vehicle having at least one movable roof section (7) which when closed abuts a windshield frame (3) at the front of the vehicle and has lateral outer areas that respectively abut a support (8), with the supports being at least partly relocatable in lateral columns (5) of the windshield frame (3) to form an open roof section (2A), in particular a motor vehicle in accordance with one of the claims 1 to 7, characterized in that the end (31) of the support (8) at the rear of the vehicle is provided to be accommodated in a centered manner at a locking means (11) in a rear roof section, with the locking means (11) being developed with a cylindrical fastening element (34) having a centering recess (33), in which a rocker-mounted locking lever is arranged, which is designed to engage in a recess (36) at the end of the support (8) at the rear side of the vehicle in a locking position.
9. Motor vehicle in accordance with claim 8, characterized in that that the locking lever (35) is transferred from a resting position into the locking position when the end of the support (8) at the rear of the vehicle is introduced into the centering recess (33) of the fastening element (34).

10. Motor vehicle in accordance with claim 9, characterized in that the locking lever (35) cooperates on the end (35A) that faces the support (8) with a spring (39) and on the end (35B) that faces away from the support (8) with a sleeve (27) which is guided on the fastening element (34) and rotatably connected to the rear roof section (9'), with the sleeve (27) being released for longitudinal displacement when the end (31) of the support (8) at the rear of the vehicle is introduced into the centering recess (33) of the fastening element (34) and thus releases the locking lever (35) which is pressed by the force of the spring (39) into the recess (36) at the end (31) of the support (8) lying in the rear of the vehicle.

11. Motor vehicle in accordance with claim 10, characterized in that when the locking means (11) is in an unlocked state, the sleeve (29) is held axially by a detention means (40) which cooperates with a spring element (42) and upon introduction of the end (31) of the support (8) is moved into a position that releases the axial movement of the sleeve.

12. Motor vehicle in accordance with claim 11, characterized in that the detention means (40) is developed with a lever element (41) which, when the locking means (11) is in a non-locking state, projects with a first lever end (41A) into the centering recess (33) of the fastening

element (34) and with a second lever end (41B) which is displaced by the force of the spring element (42) into a position projecting over the outer circumference of the fastening element (34) and holds the sleeve (27) axially, and which, when the locking means (11) is in a locked state, is pivoted by a force exerted by the end (31) of the support (8) at the rear of the vehicle on the first lever end (41A) against the force of the spring element (42) so that the second lever element (41B) is located within the outer circumference of the fastening element (34).

13. Motor vehicle having at least one movable roof section (7') which in a closed state abuts a windshield frame (3) at the front of the vehicle and has lateral outer areas that respectively abut a support (8), with the supports (8) being at least partly relocatable in lateral columns (5) of the windshield frame (3) to form an open roof section (2A), in particular motor vehicle in accordance with one of the claims 1 to 7,  
c h a r a c t e r i z e d   i n   t h a t  
at its end (31) in the rear of the vehicle, the support (8) is provided to be held in a centered manner on a locking means (11') at a rear roof section (9'), with the locking means (11') being developed with a cylindrical fastening element (34') comprising a centering recess (33') in which a longitudinal slide element (44) connected to a snap-in element (42) is arranged, and with the displacement of said longitudinal slide element causing the snap-in element

(42) to engage in a snap-in recess (43) at the end (31) of the support (8) at the rear of the vehicle, or releasing said recess.

14. Motor vehicle in accordance with claim 13, characterized in that when the end (31) of the support at the rear of the vehicle is introduced into the fastening element (34') and the longitudinal slide element (44) is displaced, the snap-in element (42) is transferred by a joint mechanism (45) from a resting position into the locking position in that a spring acting on a first point of force application at the joint mechanism (45) is released and presses the snap-in element (42) into the snap-in recess (43) at the end (31) of the support (8) at the rear of the vehicle.

15. Motor vehicle in accordance with claim 14, characterized in that the point of force application of the spring (47) is developed on the longitudinal slide element (44), which in a non-locking state is held against the force of the spring (47) by a sleeve (27) that is guided on the fastening element (34') and rotatably mounted to the rear roof section (9'), with the sleeve (27) being displaced in the direction of the support (8) after the end (31) of the support at the rear of the vehicle is introduced into the centering recess (33') and thus releases the longitudinal slide element (44) of the joint mechanism (45), which presses the snap-in element (42) into a snap-in recess (43) on the support

(8) with the force of the spring (47) through a lever (46).

16. Motor vehicle in accordance with one of the claims 13 to 15,

characterized in that the snap-in cavity is developed as a clearance groove (43) on an axial extension (8) in the area of the end (31) of the support (8) at the rear of the vehicle.

17. Motor vehicle in accordance with one of the claims 10 to 16,

characterized in that the sleeve (27) is guided on the fastening element (34, 34') along a groove (51) that runs in longitudinal direction of the fastening element (34, 34').

18. Motor vehicle in accordance with claim 17,

characterized in that the groove (51) formed on the fastening element (34, 34') is in alignment with the tooth batten (18) on the support (8), with the sleeve (27) being guidable over the groove (51) of the fastening element (34, 34') and the tooth batten (18) of the support (8).

19. Motor vehicle in accordance with one of the claims 1 to 18,

characterized in that the fastening elements (34, 34') assigned to the two lateral supports (8) are developed with two each

grooves (51) arranged in mirror fashion as identical parts.

20. Motor vehicle in accordance with one of the claims 1 to 19,  
characterized in that  
the end of the support (8) at the rear of the vehicle  
is developed as a tapered- or semi-spherical area  
(31).

21. Motor vehicle in accordance with one of the claims 1 to 20,  
characterized in that  
the centering recess of the fastening element (34, 34') is developed as a receiving taper (33, 33').

22. Motor vehicle in accordance with one of the claims 1 to 21,  
characterized in that  
the supports (8) are developed as identical parts.

23. Motor vehicle in accordance with one of the claims 1 to 22,  
characterized in that  
the support (8) is preferably detained by an  
irreversibility of the drive means (17) after it is  
lowered into the lateral column (5).

24. Motor vehicle in accordance with one of the claims 1 to 23,  
characterized in that



a central drive motor (19) is provided for both supports (8), with the drive motor (19) being connected in transverse direction to the vehicle with the respective pinion (20) cooperating with the support (8).

25. Motor vehicle in accordance with one of the claims 20 to 24,

characterized in that a servo motor (52) arranged at the roof section (7') is provided to drive the sleeves (27) guided on the fastening elements (34') and the roof section (7') connected thereto, which can be connected by an accumulator with a conductor (54) at the supports (8).

26. Motor vehicle in accordance with claim 25,

characterized in that that the conductor at the supports (8) is developed as a conductor path (54) carrying current in the area of the lateral column (5) of the windshield frame (3) and the contact element (55) is developed as a rubbing contact.

27. Motor vehicle in accordance with one of the claims 10 to 24,

characterized in that a servo motor (52) is arranged on the roof section (7') to drive the sleeves (27) guided on the fastening elements (34') and the roof section (7') connected thereto, and said servo motor can be triggered wirelessly and has an accumulator (53) which

preferably can be charged when the roof section (7')  
abuts the windshield frame (3).